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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,108	07/15/2003	Bryan Virge Butler	WEAT/0177.P1	9083

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EXAMINER
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BELT, SAMUEL E

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/621,108

Applicant(s)

BUTLER, BRYAN VIRGE

Examiner

Samuel E. Belt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/22/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 09/22/2003 is acknowledged. Since submission complies with 37 CFR 1.97 and 1.98, the examiner has considered the references listed therein.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the rapid reversal circuit must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, & 13-18 rejected under 35 U.S.C. 102(b) as being anticipated by Castel (U.S. Patent 5,660,532).

Castel discloses a multiphase piston-type pumping system comprising a pair of substantially counter synchronous fluid pumps (Figure 1, items 1 & 1A); a power fluid circuit (column 6, lines 26+) for providing power fluid to and from the pair of fluid pumps; an indexing circuit (column 6, lines 20+) for regulating the fluid in the power fluid circuit,

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whereby the indexing circuit ensures that the pair of fluid pumps remain in substantially counter synchronous operation; and a trim circuit (column 6, lines 40+) for providing fluid to the indexing circuit; further including a rapid reversal circuit (column 4, lines 25+) to control the rate and direction of the pair of counter synchronous fluid pumps; wherein the rapid reversal circuit includes at least one poppet valve (Figure 1, item 17); the indexing circuit further includes an acceleration valve (Figure 3, items 62 & 64) in selective communication with the power fluid circuit and the indexing circuit; further including a charge circuit (column 6, lines 32+) for providing fluid to the power fluid circuit and the indexing circuit; the power fluid circuit further includes a valve member (Figure 3, item 52b) and an accumulator (Figure 3, item 55) for ensuring adequate fluid in the power fluid circuit; the power fluid circuit further includes a pump (Figure 3, item 51), a signal box (Figure 3, item 59) and at least one pair of limit switches (Figure 3, items 56 & 56a) for controlling the direction of fluid in the circuit.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Castel (US Patent 5,660,532) in view of Munzenmaier et al. (US Patent 6,171,075). Castel sets forth a device as described above, which is substantially analogous to the claimed invention. The Castel device differs from the claimed invention in that there is no explicit teaching of a pressure sensing member for introducing fluid into the power fluid circuit or the indexing circuit when the pressure in any one or more circuits falls below the charge circuit pressure. Munzenmaier et al. teach a pump control system having a pressure regulator (Figure 1, item 71) for setting a low-pressure level.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to modify the Castel device by using the pressure regulator as taught by Munzenmaier et al. in order to advantageously control the fluid level so that the pump operates at its maximum capacity.

Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Castel (US Patent 5,660,532) in view of Berke-Jorgensen (US Patent 6,126,413). Castel sets forth a device as described above, which is substantially analogous to the claimed invention. The Castel device differs from the claimed invention in that there is no explicit teaching of a biasing member for biasing one of the fluid pumps as the fluid pump moves from the retracted position. Berke-Jorgensen teaches a circulation pump system having a spring member (Figure 19, item 37) for returning the piston of the pump to an extended position.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to modify the Castel device by using the spring member as taught by Berke-Jorgensen in order to beneficially control the volumetric effect of the piston.


### **Conclusion**

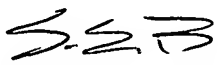
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel E. Belt whose telephone number is (571) 272-7820. The examiner can normally be reached on M-F, 8 - 4:30EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on (571) 272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SEB

  
**TAE JUN KIM**  
**PRIMARY EXAMINER**

  
Samuel E. Belt  
04/10/2006